

*Date: Friday, 23/01/2009 8:47:03 AM
 User: Julie Dawson

Process Sheet

*Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : AFT MAINTENACE STEP
Job Number : 45187	
Estimate Number : 12455	
P.O. Number :	Part Number : D350591133
This Issue : 23/01/2009 S.O. No. :	Drawing Number : D2946 REV B
Prsht Rev. : NC	Project Number : N/A
First Issue : / / Type : LARGE FAB ASSY	Drawing Revision : REV. B
Previous Run : 43692	Material :
Written By :	Due Date : 12/02/2009 Qty: 4 Um: Each
Checked & Approved By : <u>SAD 09.01.23</u>	
Comment : Est Rev:B 05.10.14 Modified step 10 KJ/EC	
Est Rev:B 06.07.19 D2946 @ rev.b EC	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	DC	DOCUMENT CONTROL
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Comment: DOCUMENT CONTROL

Photocopy bluefile and type labels as per PPP D350-591-133 CHG002

SAD 02/03/06

2.0	D2622120C	Step Extrusion
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Comment: Qty.: 0.5250 Each(s)/Unit Total : 2.1000 Each(s)

Pick:

Qty Part Number	Description	Batch
1 D2622-120C	Extrusion	B44069

SAD 09-02-29 (4)

3.0	LARGE FAB 1	LARGE FABRICATION RESOURCE 1
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Comment: LARGE FABRICATION RESOURCE 1

1-Cut D2622-120 extrusion to 62.06" long as per Dwg D2946

2-Debur

Ensure that 57.09" minimum extrusion is kept and identify to be used for D350-591-215/-216.

SAD 09-02-29 (4)

4.0	QC5	INSPECT WORK TO CURRENT STEP
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Comment: INSPECT WORK TO CURRENT STEP

5.0	D2734	Step End Plate
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Comment: Qty.: 2.0000 Each(s)/Unit Total : 8.0000 Each(s)

Pick:

Qty Part Number	Description	Batch
		B43535*

SAD 09-02-25 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Job Number: 45187

Part Number: D350591133

Job Number:



Seq. #:

Machine Or Operation:

Description :

2 D2734

End Plate 343535

Ph 09.02.25

4

6.0

D2944

Step Mounting Plate



Comment: Qty.: 2.0000 Each(s)/Unit Total : 8.0000 Each(s)

Pick:

Qty Part Number Description Batch

2 D2944 Support

836405

Ph 09.02.25

4

7.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Deburr and Bevel ends for welding

2-Weld (1) End Cap and (2) Lugs using Jig DT8440 as per Dwg D2946

A/R Aluminum Rod M108037

M110431

3-Grind End Cap welds flush

Ph 09.02.25

4

Ph 09.02.25

4

Ph 09.02.25

4

8.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

PD 09.02.25

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

09/02/25 (14)

10.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

md / Ph.

09/02/25

11.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

09-02-25 (14)

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT MAINTENACE STEP

Job Number: 45187

Part Number: D350591133

Job Number:



Seq. #:

Machine Or Operation:

Description :

12.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

Remove alodine prior to welding. Weld end cap as per Dwg D2946. Grind end cap weld flush.

A/R AL ROD BATCH: M108037

FL 09.02.27 4

13.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

RF 09-02-27 (4)

14.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 09/02/27 (4)

15.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Touch Up Chemical conversion

MD / FL

09/03/03 (4)

16.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

START TIME: 11:05

OVEN TEMPERATURE: 320°

FINISH TIME: 11:35

FL 09/03/03 (4)

17.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Wing Walk as per Dwg D2946 and QSI 005 4.4

FL 09-03-04 (4)

18.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: Inspect Powder Coat and Wing Walk

M-FL 09/03/04 (4)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Job Number: 45187

Part Number: D350591133

Job Number:



Seq. #:

Machine Or Operation:

Description :

19.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1
Pick Packing Kit

20.0

D22301

Lug

6 @



Comment: Qty.: 4.0000 Each(s)/Unit Total : 16.0000 Each(s)
Mounting Lug
Batch: 44700

SL

21.0

D22303

Lug



Comment: Qty.: 4.0000 Each(s)/Unit Total : 16.0000 Each(s)
Mounting Lug
Batch: 44045

SL

22.0

D2856400

Abrasion Strip



Comment: Qty.: 1.2606 f(s)/Unit Total : 5.0425 f(s)
Abrasion Strip 7.20" long x2
Batch: 42432

SL

23.0

D2945

Step Mounting Plate



Comment: Qty.: 1.0000 Each(s)/Unit Total : 4.0000 Each(s)
Step Mounting Plate
Batch: 45264

①
B35690

9/3/5

SL

24.0

AN47A

Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total : 8.0000 Each(s)
Bolt
Batch: M108928

SL

25.0

AN411A

Bolt



Comment: Qty.: 4.0000 Each(s)/Unit Total : 16.0000 Each(s)
Bolt
Batch: M106605

9/3/4

44

SL

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT MAINTENACE STEP

Job Number: 45187

Part Number: D350591133

Job Number:



Seq. #:

Machine Or Operation:

Description :

26.0

AN414A

Bolt



Comment: Qty.: 8.0000 Each(s)/Unit Total : 32.0000 Each(s)

Bolt

Batch: M107534

50

27.0

AN960JD416

Washer



Comment: Qty.: 14.0000 Each(s)/Unit Total : 56.0000 Each(s)

Washer

Batch: M110523

50

28.0

MS21042L4

Nut



Comment: Qty.: 14.0000 Each(s)/Unit Total : 56.0000 Each(s)

Nut

Batch: M109282

50

29.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

509/06 EE

30.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D350-591-213

Location: 80

PPP Rev: I

9/3/6

44

31.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

1109/03/06

Job Completion



MF 09-03-06

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries

DART

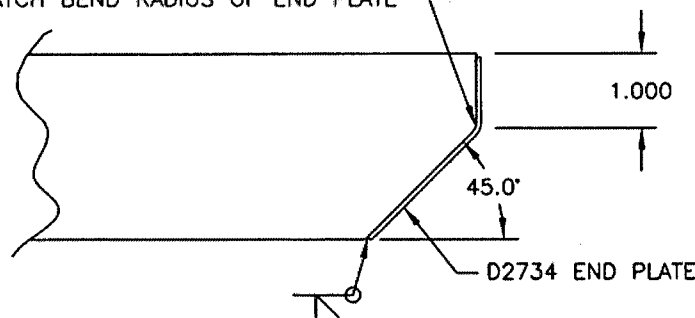
D2946 STEP ASSEMBLY PARTS LIST

Part No.	Description	QTY
D2946	Step Assembly	X
D2622-63	STEP EXTRUSION*	1
D2734	END PLATE	2
D2944	STEP MOUNTING PLATE	2

*cut per drawing

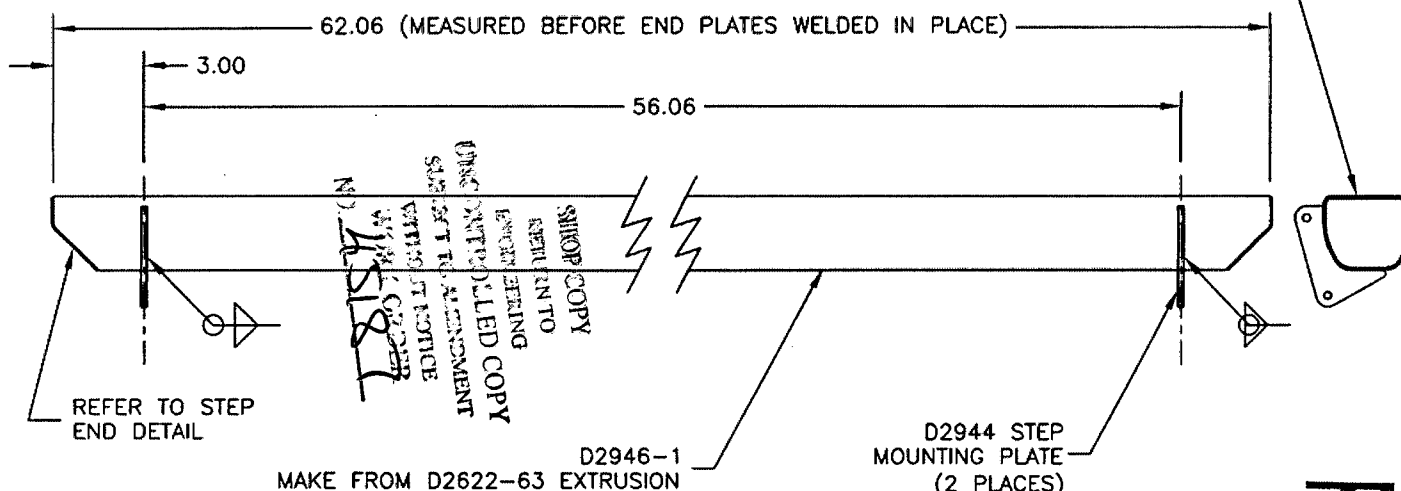
NOTE: ALL WELDS SHALL BE 100% VISUALLY INSPECTED BY A QUALIFIED INSPECTOR PER DART QSI 004

ROUND CORNER OF EXTRUSION TO MATCH BEND RADIUS OF END PLATE



**TYPICAL STEP END DETAIL
NOT TO SCALE**

APPLY BLACK ANTI-SKID ON TOP SURFACE TO BOTTOM OF TOP RADIUS



D2946-041 STEP ASSEMBLY

D2946 STEP ASSEMBLY

- 1) MAKE FROM D2622 STEP EXTRUSION
- 2) WELD PER DART QSI 004
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT ENTIRE ASSEMBLY WHITE (4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

DESIGN	DRAWN BY	DART AEROSPACE LTD
CP	PH	HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO.
		D2946
DATE	TITLE	REV. B
05.11.14	STEP ASSEMBLY	SHEET 1 OF 1
A	99.12.13	NEW ISSUE
B	05.11.14	UPDATE FINISHING NOTE
		SCALE 1:6

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 Job Number : 45187
 Estimate Number : 12455
 P.O. Number :
 This Issue : 23/01/2009 S.O. No. :
 Prsht Rev. : NC Part Number : D350591133
 First Issue : / / Type : LARGE FAB ASSY Drawing Number : D2946 REV B
 Previous Run : 43692 Project Number : N/A
 Material :
 Due Date : 12/02/2009 Qty: 4 Um: Each
 Written By :
 Checked & Approved By : JUD 09.01.23
 Comment : Est Rev:B 05.10.14 Modified step 10 KJ/EC
 Est Rev:B 06.07.19 D2946 @ rev.b EC

REFERENCE ONLY

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 DC DOCUMENT CONTROL



JUD 09.03.05



Comment: DOCUMENT CONTROL

Photocopy bluefile and type labels as per PPP D350-591-133 CHG002

SAD 09.03.05

2.0 D2622120C Step Extrusion



Comment: Qty.: 0.5250 Each(s)/Unit Total : 2.1000 Each(s)

Pick:

Qty Part Number Description Batch
 1 D2622-120C Extrusion B44069

SAD 09.02.29

3.0 LARGE FAB 1 LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Cut D2622-120 extrusion to 62.06" long as per Dwg D2946

2-Deburr

Ensure that 57.09" minimum extrusion is kept and identify to be used for D350-591-215/-216.

SAD 09.02.29

4.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

SAD 09.02.29

5.0 D2734 Step End Plate



Comment: Qty.: 2.0000 Each(s)/Unit Total : 8.0000 Each(s)

Pick:

Qty Part Number Description Batch

B435354